

ART. XV.—*Case of Extensive Fracture of the Pubic Bones, with Laceration of the Bladder.* By JOHN W. LODGE, M. D., Surgeon to the Philadelphia Hospital. (With a wood-cut.)

EXCEPTING similar injuries of the skull and spinal column, fractures of the pelvic bones are the most dangerous and fatal. This depends upon the facts, that great force is usually required to heal these bones, and the proximity of important and vital organs.

The records of surgery contain many reported instances of fractures of the pubes and ilium, but none, so far as I know, from a somewhat extensive research, as peculiar and interesting as the one herein described.

The instance nearest corresponding is that published by Dr. Clark in the *Boston Medical and Surgical Journal*, vol. liii. p. 185. In that case there were three fractures, all involving the right innominate bone—one through the horizontal ramus of the pubes near the symphysis, one through the junction of the pubes and ilium, and another through the ramus of the ischium anterior to the tuberosity; the bladder was ruptured, and the patient lived twenty-six days.

Cappelletti, quoted by Hamilton, relates the case of a man, aged fifty-four years, who was thrown from a carriage and detached a portion of the ramus of the pubes and ischium by muscular contraction.

Dr. Gross (*System of Surgery*, vol. ii. p. 127) gives an illustration of a specimen from the cabinet of Dr. Neill, which corresponds at two points of fracture to the present instance. Besides the numerous fractures and extensive injury to the soft tissues, the following case has some points of interest which make it worthy of notice.

E. H. Gapwalls, private, 186th Regiment Penn. Vols., a healthy, robust man, aged about twenty-three years, on duty at the Schuylkill Arsenal, was severely injured on the 8th of April, 1865, by a mass of sand eaving in upon him while at work in a quarry. After some difficulty, the soldiers succeeded in extricating him. The sand had buried him about as high as the axilla, having thrown him forward in a leaning position; the sand, from the force of the slide, being pressed very compactly around him.

He complained of extreme pain about the lower pelvic region and down the thighs immediately after the accident, and during the efforts made to relieve him.

I saw him about two hours after the occurrence, and found considerable prostration; pulse 100; examined the spine carefully, and found no tenderness in any portion of its extent, although upon either side of the lumbar vertebrae the pain upon pressure was intense, extending down either groin to the perineum, the slightest movement of any part of the body greatly aggravating it.

The body was carefully examined in search of some external injury, but none discovered; not the slightest cut or contusion existed. A little

stimulus was given, and the man transferred to the U. S. A. General Hospital, South Street.

*April 9.* Suffering great pain in the lower part of the abdomen and along the groins; pulse 98, regular; no fever. Complains of fulness of the bladder and continuous desire to pass urine, none having been passed since before the accident, now nearly twenty-four hours. On introducing the catheter, the instrument passed very readily, apparently to the membranous portion of the urethra; it then turned abruptly to the right side, from which place about four ounces of blood passed through it. The escape of blood gave no relief; the intense desire still remained. The perineum had begun to swell, and symptoms of urinary infiltration were being developed. Upon the right side, bounded by the raphe in the centre, the scrotum in front, and the anus behind, the swelling was making rapid progress, and had begun to extend along the inside of the right thigh. A grain of morphia was given, and fomentations of hot laudanum were applied to the abdomen.

*Afternoon.* The swelling about the perineum and thigh had continued; stomach excessively irritable; has passed no urine; introducing the catheter as far as the membranous portion, a few drops of blood escaped. A consultation of the surgeons of the hospital, Drs. Körper, Maury, McArthur, and Lovell, was called, and it was thought best to cut through the swelling into the bladder, as in the lithotomy operation, to turn out the clotted blood and relieve the bladder of the urine. In view of the probable difficulty in reaching the bladder through the parts so altered by disease, and as there existed some doubt as to the best course to pursue, it was decided to ask the opinion of Dr. Gross, the distinguished Professor of Surgery in Jefferson Med. College. Dr. Gross saw the case with us in the evening, and, after some difficulty, succeeded in getting the catheter into the bladder, and removing about eight ounces of urine and blood. Much relief followed the operation. Warm fomentations to be continued, with morphia to "allay pain and quiet nervous irritation." It was concluded not to attempt further relief by the proposed operation.

*10th.* Passed a sleepless night; large quantities of morphia were given to produce sleep, but it was almost immediately rejected by the irritable stomach; pulse feeble and more frequent (102). Passed the catheter with much difficulty into the bladder, and got about four ounces of urine and as much blood. Swelling of the perineum increasing, extending further upon the thighs and forward upon the scrotum. Directed the anodyne by mouth and rectum to be continued, and efforts to be made to allay the vomiting, which was now excessive and almost continuous.

*11th.* Slept better than during the preceding night; had occasional severe dartings of pain through the pelvis; pulse 100, and rather more feeble; skin yellow, and countenance not very good. Dr. McArthur removed, with the catheter, during the night, about ten ounces of urine and some blood. Swelling continues to increase, extending about four inches along the thigh, and has involved the whole scrotum, which is much distended, moist, and of a very dark colour, emitting a strong urinous odour. The swelling upon the thigh is hard, red, and very painful. Introduced the catheter several times during the day, and removed about ten ounces of dark disfluent blood. Continue same treatment with champagne and whatever other stimulants or nourishment he will take.

*12th.* Had a bad night; nausea and vomiting almost continuous. Dr. Lovell succeeded in getting the catheter into the bladder and removing

about four ounces of urine. Swelling increasing; made several incisions into the distended scrotum, through which the urine flowed in big streams; pulse 105, feeble and irregular; skin yellow; mind perfectly clear. Anodyne injections; stimulants and fomentations continued.

13th. Slept better; stomach a little more quiet; pulse 105; rather more strength; tongue coated; skin very yellow. Swelling progressing, having extended eight inches down the inner side of the thigh, upward along the right groin, and backward to the buttock; the swelling is of a dark colour, and very sensitive. Passed the catheter, but got nothing but some gory blood; the urine passing through the incisions made into the scrotum; mind clear; takes no nourishment except a little champagne.

14th. Sleepless and restless night; stomach rejects everything; pulse 108, very feeble; the swollen perineum and scrotum quite dark, and just at the junction of the two the parts are beginning to die; the inner side of the right thigh is also ready to slough; mind perfectly clear.

15th. Slept some during the night; less vomiting, a few drops of chloroform control the stomach for a short time; tongue coated and dry; refuses all stimulants; pulse 111, feeble; skin yellow. Sloughing of the scrotum has commenced, the urine oozing through the sloughing mass.

16th. Pulse 118, quick and feeble; tongue coated and very dry; mind perfectly clear; sloughing continuing in the perineum and scrotum, and has extended upon the thigh as deep as the adductor muscles. A large slough was taken from the perineum, and all the urine now passes through the large cavity. Passed the catheter in the urethra, the distal end coming out through the perineum. To continue whatever stimulants he will take, and dress the parts with disinfecting lotions. Dr. Waples, who took charge of the patient from this time, reports that he rapidly sank, the sloughing spreading so as to involve the whole perineum, the posterior half of the scrotum, and an area of eight inches upon the thigh. The sloughing of the perineum penetrated as deep as the membranous portion of the urethra, that upon the thigh through skin and fasciae so as to expose the adductor muscles. During the progress of the case no decided symptoms of uremia or pyæmia occurred; the mind remained almost unaffected until death. He died April 22, just two weeks after the occurrence of the accident.

A *post-mortem* examination was made about fifteen hours after death, Drs. Gross, Körper, Maury, McArthur, Waples, and Lovell being present. Body much emaciated and the skin very yellow. Upon opening the abdomen, the vessels of the peritoneum were found filled with blood of a very dark colour, the membrane itself being normal, except the portion covering the posterior surface of the bladder, the *recto-vesical fold*; here were traces of the previous existence of inflammation, and adhesions of some strength bound it to the bladder. No other organ of the abdominal or pelvic cavities was involved in the accident.

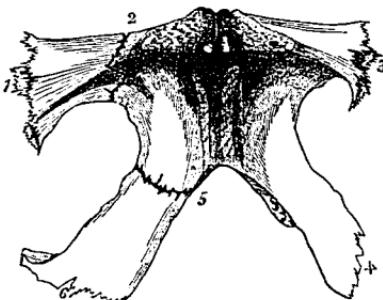
The right thigh was enormously swollen, and infiltrated with pus and decomposed urine, one long sinus-like abscess extending along the under surface of Poupart's ligament as far as the right anterior superior spinous process of the ilium. The perineum was entirely gone, the sloughing having destroyed the most of the scrotum and all the tissues between the tuber ischii down to the prostate gland and rectum. The part of the penis under the symphysis, corresponding to the membranous portion of the urethra, was almost entirely severed, its continuity being held only by some cellular tissue and part of the compressor urethra muscle.

*Fractures.*—The most interesting points of the case were the numerous and remarkable fractures of the pelvic bones, six distinct and complete fractures having occurred. Of these, four were situated upon the right side of the pelvis, and two on the left. *Of the right side.*—1st. One through the horizontal ramus of the pubes, an inch from the symphysis. 2d. About an inch and a quarter externally; thus separating more than an inch of the ramus. This fragment was driven downwards and inwards, and was found in front and close up to the prostate gland, having completely divided the membranous portion of the urethra; with this exception, there was but little displacement of the fragments. 3d. One through the ascending ramus of the pubes, commencing about three-quarters of an inch below the symphysis, and passing obliquely upwards and inwards for about an inch and a half. 4th. About an inch and a quarter below the preceding, and corresponding to the primary centre of union between the ascending ramus of the ischium and descending ramus of the pubes, a long fracture, sloping obliquely backwards; there was no displacement of this fragment.

*Left side.*—1st. One fracture exactly corresponding to the second described upon the right side. 2d. One like the last described upon the right side, only much more obliquely broken. The side which had fewest fractures had them exactly represented on the other. Excepting the lower fracture on the right side, none involved other than the pelvic bones.

Another fracture on the right side must be mentioned—a scale of the compact structure of the posterior surface of the body of the pubes, two inches long, and apparently continuous with the first fracture described upon the right side; this fragment was lost.

The accompanying figure, made by Mr. Stoesser, is an admirable representation of the connected fragments.



*Remarks.*—It is difficult to understand how such fractures thus described could have been produced by the kind of force applied. So far as could be ascertained, he was struck with nothing but the sand, in which I could find no other body which could have injured him, nor any near object against

which he might have been thrown. As already mentioned, no external injury existed, which would have been almost certain to occur if the force had been concentrated. "The causes of fractures of the pelvis, as might be expected, are always of a violent kind, such as falls from a great height, or some heavy weight passing over them. The pubic bones, however, are most frequently fractured by a crushing kind of force, or by one that acts against the whole pelvis." (Lonsdale.)

Another curious feature of the case is the symmetry of the fractures, even the splinters of which are strangely alike. This might imply that the bones were not entirely healthy, but no evidence of disease could be found; nothing that could possibly be mistaken for syphilis or other specific disease. Still, we cannot be positive that no disease existed, knowing how marvellously refined are the affinities of the formative processes; corresponding parts on opposite sides of the body being so wonderfully alike in their nutrition, that what affects one may affect the other with exact resemblance. Chemistry may not be able to detect this refinement of the nutritive events, but a morbid material in the blood or an injury may.

PHILADELPHIA, June 18, 1865.

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*Art. XVI.—Case of Premature Delivery, accompanied by Unusual Circumstances.* By T. C. WALLACE, M. D., of Shushan, Washington Co., N. Y.

ON the 20th ult., about 2 o'clock P. M., I was called to visit Mrs. L., *mt. 30.* I found her suffering from violent and incessant vomiting, with severe cramps in the back and lower extremities. She had suffered thus since the previous evening. She considered herself about eight months advanced in pregnancy, although she said it was difficult for her to reckon her time correctly, as she always menstruated throughout her pregnancies. She has borne three children, and her catamenia have been as regular and as abundant when she has been pregnant as at other times. Her mother, who has given birth to five children, informed me that she also has always been regularly "unwell" whilst *enceinte*. About eight months previously, Mrs. L. had been troubled for a few mornings with nausea and slight vomiting, from which she inferred she was pregnant, and had computed her time accordingly. She has had uniformly good health from that time until her present illness. I prescribed for her ten grains of oxide of zinc with five grains of subnitrate of bismuth, to be repeated every half hour, if necessary, and applied to the epigastrium a flannel cloth soaked in a mixture of chloroform one part, olive oil four parts. Her vomiting ceased soon after taking the second powder, and I left her quiet and comfortable.

Early the same evening I was again summoned, and, on my arrival, was informed that a few moments previously there had been a slight gush of "waters," and that there was at present a small flow of blood. A vaginal